Music Writer-'64'™

M'Soft Inc.

SOPHISTICATED SOFTWARE

Product of:

Double E Electronics

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SPECIAL COPYRIGHT NOTICE

Three songs on the program disk are also Copyrighted 1983 and apply to the same restrictions listed on the previous page. The songs on the **MUSIC WRITER 64** Program Disk that apply to the these copyright laws are:

QUADRA BLUES
AGATHA'S PLACE
THE MIND'S EYE
SONIC SID

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MUSIC WRITER 64
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INTRODUCTION

MUSIC WRITER 64 is innovative software for the Commodore 64 computer which allows the user to fully utilize the capabilities of the S.I.D. chip (SOUND INTERFACE DEVICE). This program gives you the ability to compose and listen to your own music. It also allows you to preserve your original composition in printed form.

MUSIC WRITER 64 is an excellent tool for musicians of all ability levels. For beginners, it reinforces basic concepts: Clefs, octaves, notes, key signatures, harmonies, ect. More advanced students may use the program as a musical laboratory to explore and practice more complex musical theories. Professionals will discover that **MUSIC WRITER 64** is the ultimate musical device which can be adapted to fit your needs and abilities with a minimum of time and effort on your part. **MUSIC WRITER 64** sight reads and allows you to correct your compositions immediately.

MUSIC WRITER 64 is a music processor much like a wordprocessor in its ability to edit. As with a wordprocessor, many options are available at any given point. Each section of the program is documented separately to allow for quick reference; however, we do recommend that you read this manual thoroughly before attempting to use the program. When you have become familiar with the outlined procedures, use the manual as a resource guide to aid you.

Throughout the manual several different modes are referenced. No program changes are made to move from the Write Mode to the Edit Mode or the Visual Play Mode. These are labeled in the manual to allow for quick reference and better understanding during operation.

KEYBOARD DEFINITIONS

For the most part, the keyboard on the Commodore 64 closely resembles a standard typewriter keyboard. However, there are some differences with the addition of the special function and cursor keys.

The function keys are the set of four large keys on the right side of the computer. The F1, F3, F5 and F7 can be accessed by simply pressing the key with the appropriate marking on the top. The F2, F4, F6, and F8 must be accessed by holding the shift key down and pressing the key with the appropriate marking on the front.

The cursor keys are the two keys on the lower right side of the keyboard marked with the letters "CRSR" (<=>) and bi-directional arrows. Music Writer 64 uses the cursor with the horizontal arrows for scrolling songs.

You will also notice a key located on the upper right-hand corner marked "INST/DEL". This key will be used to delete unwanted notes and rests etc.

There are several points in this manual which refer to the use of SHIFT or CTRL with the use of another key. In order to operate these selections properly, hold down on the SHIFT or CTRL and press the key which is referenced.

STARTING UP

Since **MUSIC WRITER 64** is a music processor, it has a great many options from which you may choose. A flow chart or diagram has been provided to show you the different sections of the program. Refer to the chart when you want to move from section to section.

LOADING

To load **MUSIC WRITER 64,** type LOAD"*",8,1 <RETURN> . This loads part one of the program (which allows you to access the rest of the program). When part one is loaded, the word READY will appear on the screen, and the cursor will be blinking below. Next type RUN. Hit <RETURN> . The screen will go blank. Then a copyright notice will appear. The message LOADING will appear on the same screen. The program takes about 90 seconds to load. During the loading procedure, the disk drive will make a rattling sound.

When the program has finished loading, the clef entry choices will appear on the screen. This is the WRITE section of the program. You will be prompted to choose CLEF signs to be used for each voice. You are given the choice of TREBLE (T) or BASS clefs (B). At this point, it is not important which clefs you enter. We will return to this section later. Because **MUSIC WRITER 64** is intended to primarily create music, you would normally wish to start at the staff lines; however, for instructional purposes to acquaint you with the use of the program, we shall deviate from the WRITE MODE for the time being. Press the ← key at the upper left corner of the keyboard. This will take you to the MAIN MENU.

This MENU has the following options:

1) WRITE/PLAY
2) PRINT:1525
3) PRINT : "CONNECTION"*

DISK OPERATIONS

4) LOAD
5) SAVE
6) DIRECTORY
7) FORMAT
8) INITIALIZE
9) SCRATCH FILE
0) VALIDATE

From the MENU, you may choose to write (and/or) play a song, use the printer routines or use the disk operations.

PLAYING A PRE-PROGRAMMED SONG FROM THE DIRECTORY

MUSIC WRITER 64 allows you to play a song using two separate modes. They are:

1. SOUND CONTROL MODE
2. VISUAL PLAY MODE

Included on the PROGRAM DISK are six (6) pre-programmed examples of what **MUSIC WRITER 64** can do. The first thing we will do with **MUSIC WRITER 64** is load and play one of these songs using the SOUND CONTROL MODE.

Press four (4) to enter the LOAD section of the program. The screen will say "PLEASE WAIT . . ." The computer will check for either the PROGRAM DISK or a SONG DISK. If neither the PROGRAM DISK or the SONG DISK is in the drive, the screen will say "WRONG DISK IN DRIVE". If either the PROGRAM DISK or a SONG DISK **are** in the drive, the screen will next display a list of songs. On top of the list of songs there appears, in reverse video, on the left side of the screen: **DIRECTORY.** On the right side of the screen in reverse video: *LOAD* *LOAD* This gives instructions on the loading of a song. The list of songs on the program disk are:

A) QUADRA BLUES
B) AGATHA'S PLACE
C) BACH 2 PART #1
D) BACH 2 PART #2
E) SONIC SID
F) THE MIND'S EYE

To load any of these songs, press the letter next to the song title. To load the first example song, type A. The screen will say SEARCHING FOR 0: QUADRA BLUES. When the computer has found the song, the word LOADING will appear. After the song has finished loading, the computer will verify the song. The message SEARCHING will appear followed by the word VERIFYING. If the verify shows no error, TEST SHOWS ALL OK will appear. If the screen displays TEST SHOWS ERROR!!?. Hit the ←, which will take you back to the WRITE SCREEN. Repeat the loading process. The song should properly load the second time.

PLAY

After the song has loaded, HIT <RETURN> and the staff screen will reappear.

To play the song, HIT <F1>. The following screen will appear:

PLAY

F1 PLAY VOICE #1
F3 PLAY VOICE #2
F5 PLAY VOICE #3
F7 RESET & START OVER
← EXIT
HIT RETURN WHEN CHOICES HAVE BEEN MADE

All three voices are turned on when this section is accessed for the **first** time. F1, F3, and F5 are **on** switches only. In order to choose selected voices, press F7 to RESET & START OVER. Then press F1 or F3 or F5 to hear Voice One, Voice Two, or Voice Three respectively. To hear all three voices press F1, F3, and F5. Once the voices have been selected they will remain unchanged until new settings are selected. When you have chosen the voices and pressed <RETURN>, the following screen will appear:

F1 PLAY FROM START
F3 PLAY FROM PLACE
F5
F7
← EXIT

To start from the beginning of the song, press F1 (PLAY FROM START). The song will play from beginning to end unless you choose to EXIT. If you exit from the song and choose to return to that song, press F3 (PLAY FROM PLACE). The system will begin to play the song from the point at which you quit. This point of entry is also maintained when exiting the write mode.

The following screen will appear and the song will begin to play.

HIT ← to EXIT

1 TRIANGLE	**8** R.M. 1 & 3	PRE-SETTING
2 SAWTOOTH	**9** SYNCH 1 & 3	
3 PULSE 1	**CTRL 1** CONNECT	**F1** SET 1
4 PULSE 2	**0** INC SUSTAIN	**F2** SET 2
5 PULSE 3	+ DEC SUSTAIN	**F3** SET 3
6 PULSE 4	- INC ATTACK	**F4** SET 4
7 NOISE	**£** DEC ATTACK	**F5** SET 5
		F6 SET 6
Q TRIANGLE	**I** R.M. 2 & 1	**F7** SET 7
W SAWTOOTH	**O** SYNCH 2 & 1	**F8** SET 8
E PULSE 1	**CTRL 2** CONNECT	
R PULSE 2	**P** INC SUSTAIN	**CTRL C** =
T PULSE 3	@ DEC SUSTAIN	CLEAR
Y PULSE 4	* INC ATTACK	
U NOISE	↑ DEC ATTACK	SPEED
		CTRL F =
A TRIANGLE	**K** R.M. 3 & 2	GO FASTER
S SAWTOOTH	**L** SYNCH 3 & 2	**CTRL S** =
D PULSE 1	**CTRL 3** CONNECT	GO SLOWER
F PULSE 2	: INC SUSTAIN	
G PULSE 3	; DEC SUSTAIN	**CTRL R** =
H PULSE 4	= INC ATTACK	RESET
J NOISE	**RETURN** DEC ATTACK	SOUND

EXPLANATION OF PLAY SCREEN

MUSIC WRITER 64 gives options for changing the sound of the song you have created.

The top row of the keyboard controls VOICE ONE. Press the following keys to change the sound of voice one:
1,2,3,4,5,6,7,8,9, <CTRL> 1,0,+,-,£

The second row of the keyboard controls VOICE TWO. Press the following keys to change the sound of VOICE TWO:
Q,W,E,R,T,Y,U,I,O, <CTRL> 2,P,@,*,↑

The third row of the keyboard controls VOICE THREE. Press the following keys to change the sound of VOICE THREE:
A,S,D,F,G,H,J,K,L, <CTRL> 3,:,;,=,RETURN

VOICE ONE CONTROL

1 TRIANGLE
2 SAWTOOTH
3 PULSE 1
4 PULSE 2
5 PULSE 3
6 PULSE 4
7 NOISE
8 R.M. 1 & 3
9 SYNCH 1 & 3
CTRL 1 CONNECT
0 INC SUSTAIN
+ DEC SUSTAIN
- INC ATTACK
£ DEC ATTACK

The first 7 selections affect Wave Forms. The wave forms settings will change the timbre (tone or character) of the selected voice. These settings simulate push-button switches in their operation. Once a wave form is selected it will remain until another wave form is chosen.

R.M. (RING MODULATION) and SYNCH are special effects which merge the output of two voices. Each has a distinctive purpose to combine the affect of the voices selected. These functions are toggled on - off each time they are pressed.

CONNECT: Press keys indicated to connect notes of a voice. (**NOTICE:** Use of the control key requires you to hold down on the CTRL key while pressing the appropriate key). Press the same key to turn off.

NOTICE: The following four features are affected by registers in the S.I.D. chip. When the value in these registers is increased the length of the feature is increased. When the value is decreased the effect is decreased.

INC SUSTAIN (INCREMENT SUSTAIN): Press key indicated for each voice. This feature will lengthen the sound of all notes in the voice. Each time this key is pressed the value is increased.

DEC SUSTAIN (DECREMENT SUSTAIN): Press key indicated to decrease the length of each note.

INC ATTACK (INCREMENT ATTACK): Press key indicated to increase the attack length of each note.

DEC ATTACK (DECREMENT ATTACK): Press key indicated to decrease the attack of each note.

SPEED:
CTRL F makes the music play faster
CTRL S makes the music play slower.

NOTICE: The INC, DEC, and SPEED features are controlled by pressing the specified keys. Each time the appropriate key is pressed, the affect of the feature is expanded.

PRE-SETTING: Press the function keys to choose one of eight pre-set voice settings. (F1,F3,F5,F7,F2,F4). The pre-settings are combinations of wave forms of the three voices. These are designed to save time creating desired sounds.

CTRL C: These keys clear all sound effects with the exception of the Wave Forms you have chosen.

CTRL R: resets the sound to its original condition. When a song is saved to a disk, it is stored with the last settings at the time of the save command. The Reset feature returns the settings to this condition.

VISUAL PLAY MODE

The VISUAL PLAY MODE is accessed from the musical staff screen. After you have become familiar with the SOUND CONTROL PLAY MODE press ← . You are now back to the musical staff screen. Press SHIFT <CRSR RIGHT> . The music from the song you have chosen will begin to play and scroll across the screen from right to left. (You may need to press SHIFT CLR/HOME to restore the song to the beginning.) This mode plays the music at a much slower rate because the computer draws the notes as they are played. The song can be scrolled across the screen with or without the sound of the notes. By pressing <CTRL P> , sound can be toggled on or off.

CREATING YOUR SONG:

CLEF SIGNS:
As mentioned previously, clef settings must be chosen upon entering the program. You may return to these settings by clearing the note bank (song in memory). If you would like to change the clef settings and clear the note bank, press F8. This option will respond with a warning and allow you to abort the function.

Enter the clef signs for each voice. (T or B). After the Clefs have been chosen, the system will enter the WRITE MODE. You may now enter notes, rests, octaves, durations, measure lines, sharps, flats, and naturals. As you enter notes, the clef signs and the music will scroll to the left.

Once the clefs are set the program will enter the Write Screen. All note entry and editing that occurs will be affected on the right side of the screen.

CHOOSING AND SWITCHING VOICES:

SHIFT 1,2, or 3:

MUSIC WRITER 64 allows the user to write in three voices. Three staff lines appear on the song screen. Each staff line represents a voice. (You may write music in VOICE ONE, VOICE TWO and VOICE THREE.) The top left of the screen shows which voice you are currently writing. To switch voices, press SHIFT 1, SHIFT 2, or SHIFT 3.

NOTE ENTRY:

To enter a note you must give the computer three pieces of information in the following order:

1) NOTE NAME
2) OCTAVE
3) NOTE DURATION

1) NOTE NAME:

(Legal note names are: C,D,E,F,G,A or B).

2) OCTAVE:

(Choose octave 1, 2 or 3. Octave 1 places notes in low range, Octave 2 in middle range, Octave 3 in high range.) See Appendix B for further information.

3) NOTE DURATION:

Choose from eight durations:

1)	Sixteenth	S	5)	Whole	W
2)	Eighth	E	6)	Dotted Eighth	DE
3)	Quarter	Q	7)	Dotted Quarter	DQ
4)	Half	H	8)	Dotted Half	DH

(See Appendix B for further information). The first five are "Non-Dotted" notes. Enter the first letter of the duration's name (S,E,Q,H, or W). The last three are "Dotted Duration's". Enter (DE, DQ, or DH). (To enter one of the three Dotted Durations, first enter D and then the first letter of the Duration.) After the Duration has been entered, the dotted note will appear on the staff. Individual notes will play as they are entered.

SHARPS, FLATS, AND NATURALS

Enter Sharps, Flats, or Naturals, then enter the note name. Use the "correct sign key" to substitute for the musical notation:

+ for Sharp - for Flat £ for Natural

EXAMPLES:
Enter B Sharp as +B
Enter B Flat as -B
Enter B Natural as £B

These "sign keys" are used in place of sharps, flats, and naturals, since the true musical symbols are not common to the computer keyboard.

NOTICE: All notes entered without a sign are natural. Entering the natural sign (£) will display the sign with the note.

REST ENTRY:
Rests can be entered at any point between notes.
1) Enter R
2) Enter the duration of the rest: (S,E,Q,H or W)

ERROR BEEP:
Whenever you hit a key that is not a legal entry, the computer will beep once. The beep does not change your song. This is a feature of **MUSIC WRITER 64** which alerts you to any entry errors you may make.

MEASURE LINES:
Enter <SHIFT> M. Then enter the next note or rest. As soon as you have entered the note or rest, the measure line will be displayed on the screen along with that note or rest. (While it is not necessary to enter measure lines to write and play your song, it is certainly better form to do so.) At the top right corner of your screen, there is a three-digit number which lets you know how many measures you have written. Measure lines play an important part in editing your music. The GOTO command allows the user to access any measure on the staff lines.
[See "EDITING YOUR SONG"]

ALTERING CLEFS
This program allows three octaves per voice. (Octave 1 is in the Low Range, Octave 2 is in the Middle Range, Octave 3 is in the High Range.) To access a clef other than the one you have chosen, switch to the alternate Clef Sign.

Example: If you have chosen the Treble Clef (T), and you wish to write an F note below the range of the treble clef, switch temporarily to the Bass Clef by pressing <SHIFT> B then the note. That note will appear in a lower octave. Remember that the switch is only temporary. **MUSIC WRITER 64** will automatically return to the original clef. You may, however, switch subsequent notes to a different clef by changing the Clef Sign each time. (You may also change Bass Clef to Treble Clef by pressing <SHIFT> T.)

A SPECIAL TECHNIQUE TO CHANGE THE CLEF OF A MEASURE
You may wish to switch Clef Signs on the staff for a whole measure. Use the following technique: Enter the Clef Sign you wish to change. Designate a Whole Rest (W). Go back to the beginning of the Whole Rest and enter the melody for that measure.

Example: If you are in 4/4 time and have chosen the Bass Clef, change the measure to Treble Clef by pressing <SHIFT> T and a Whole Rest (W). After the Whole Rest has been drawn, enter your notes for that measure. (This saves you from pressing <SHIFT> T each time a note is entered.) Remember that the next measure will revert back to the original Clef chosen. You must repeat the process for subsequent measures you wish to change.

STATUS POINTS
Notice the eight points above Voice 1 on the staff screen. These are the Status Points. The Status Points will display a letter or symbol which corresponds to the key you have pressed. Each of the eight positions indicates a particular entry. For example purposes only, the points have been numbered below. Each position will be explained.

o	o	o	o	o	o	o	o
1	2	3	4	5	6	7	8

Point 1: In the following example, the Status Point 1 is used to signify the Insert Mode is activated. Status Point 1 will show the letter I

```
I
o  o  o  o  o  o  o  o
```

Point 2: In this example a Measure line has been entered. Status Point 2 shows M:

```
   M
o  o  o  o  o  o  o  o
```

Point 3: This example displays shift to the Treble Clef. Status point 3 can show (T or B) to signify a change of clef.

```
      T
o  o  o  o  o  o  o  o
```

Point 4: Status Point 4 indicates:
Sharp, Flat, or Natural signs.
♭ £
In this example a flat sign has been entered.

```
         ♭
o  o  o  o  o  o  o  o
```

Point 5: Status Point 5 indicates the name of the note being entered (A,B,C,D,E,F,G or R for Rest). In this example a C note has been entered.

```
            C
o  o  o  o  o  o  o  o
```

Point 6: Status Point 6 reflects the Octave being entered, (1,2 or 3). In this example Octave 2 has been specified.

```
               2
o  o  o  o  o  o  o  o
```

Point 7: Status Point 7 is to enter a non-dotted duration. In this example, a sixteenth note has been entered.

```
                  S
o  o  o  o  o  o  o  o
```

Point 8: Status Point 8 is used when entering dotted durations. When dotted durations are used the seventh position shows "D" and the eighth position shows duration. In this example a Dotted Quarter note has been entered.

```
                  D  Q
o  o  o  o  o  o  o  o
```

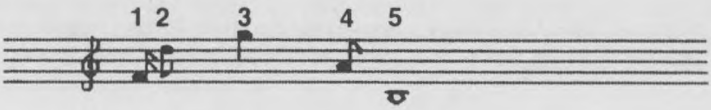
You may erase an incomplete note or rest entry by using the Reset key ↑. Once you have entered the duration of a note or rest, the note is drawn to the screen and cannot be erased by using this key. To erase a note in this case you must use the Delete option. [See "Editing Your Song"].

EXAMPLES

The following are examples of notes entered with the **MUSIC WRITER 64 PROGRAM.** Displayed above each staff are the "KEYS PRESSED" and "STATUS POINTS".

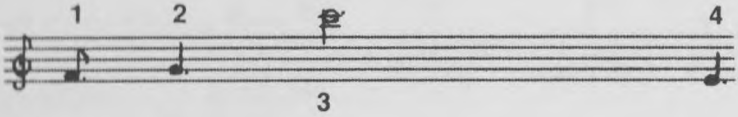
NON-DOTTED NOTES

KEYS PRESSED	STATUS POINTS
1) F1S	F 1 S o o o o o o o o
2) D2E	D 2 E o o o o o o o o
3) G3Q	G 3 Q o o o o o o o o
4) A2E	A 2 E o o o o o o o o
5) B1W	B 1 W o o o o o o o o



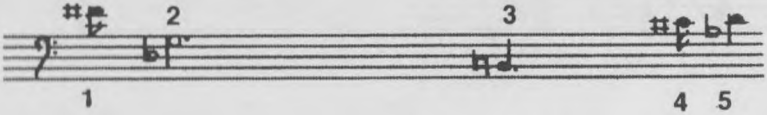
DOTTED NOTES

KEYS PRESSED	STATUS POINTS							
1) F1DE					F	1	D	E
	o	o	o	o	o	o	o	o
2) G2DQ					G	2	D	Q
	o	o	o	o	o	o	o	o
3) C3DH					C	3	D	H
	o	o	o	o	o	o	o	o
4) EIDQ					E	I	D	Q
	o	o	o	o	o	o	o	o



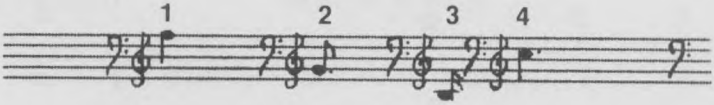
"SIGNED" NOTES

KEYS PRESSED	STATUS POINTS							
1) +F3E					+	F	3	E
	o	o	o	o	o	o	o	o
2) -G2DH				♭	G	2	D	H
	o	o	o	o	o	o	o	o
3) B2DQ					B	2	D	Q
	o	o	o	o	o	o	o	o
4) +3CS				#	C	3	S	
	o	o	o	o	o	o	o	o
5) -D3Q				♭	D	3	Q	
	o	o	o	o	o	o	o	o



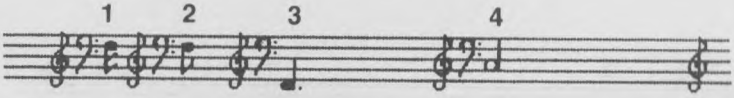
SWITCH TO TREBLE CLEF FROM BASS CLEF

KEYS PRESSED	STATUS POINTS							
1) TF2Q			T		F	2	Q	
	o	o	o	o	o	o	o	o
2) TG2DE			T		G	2	D	E
	o	o	o	o	o	o	o	o
3) TB1S			T		B	1	S	
	o	o	o	o	o	o	o	o
4) TC2DQ			T		C	2	D	Q
	o	o	o	o	o	o	o	o



SWITCH TO BASS CLEF FROM TREBLE CLEF

KEYS PRESSED	STATUS POINTS							
1) BF2S			B		F	2	S	
	o	o	o	o	o	o	o	o
2) BF2E			B		F	2	E	
	o	o	o	o	o	o	o	o
3) BF1DQ			B		F	1	D	Q
	o	o	o	o	o	o	o	o
4) BC2H			B		C	2	H	
	o	o	o	o	o	o	o	o



HELP SCREENS

To facilitate the creation of your song, four HELP SCREENS are available to you. The Help Screens display the legal entries at any given point in the Write Mode.

HELP SCREEN ONE tells which keys to press for Note & Rest Entries, Voices, Sign Keys, and Edit Options.

HELP SCREEN TWO designates Octave choices.

HELP SCREEN THREE shows which Durations are available.

HELP SCREEN FOUR shows choices for entering Dotted Durations.

You may access the HELP SCREENS in the program after any entry you make, or you may refer to reproductions in the Manual:

HELP SCREEN ONE

Press up arrow (↑) <SHIFT> H

You will see the following screen:

HELP

NOTE NAMES =	:C D E F G A B
R	:REST
+	:SHARP
-	:FLAT
£	:NATURAL
←	:GOTO MENU
↑	:RESET
(SHIFT) T	:TREBLE CLEF
(SHIFT) B	:BASS CLEF
F1	:PLAY
F8	:CLEAR NOTE BANKS
SHIFT 1	:GOTO VOICE 1
SHIFT 2	:GOTO VOICE 2
SHIFT 3	:GOTO VOICE 3
SHIFT CLR/HOME	:CLEAR SCREEN
SHIFT I	:INSERT NOTE
=>	:MOVE WINDOW RIGHT
SHIFT =>	:AUTO RIGHT
SHIFT M	:MEASURE LINE
CTRL 1-8	:CHANGE SCREEN COLOR
CTRL G	:GOTO ?
CTRL P	:VISUAL PLAY (ON/OFF)
CTRL K	:KEYBOARD

HELP SCREEN TWO

Press any legal note name. (For example, press F.) Press <SHIFT> H.

Help Screen Two will appear as:

1: OCTAVE 1
2: OCTAVE 2
3: OCTAVE 3
↑ RESET

Press the Space Bar to return to the song.

HELP SCREEN THREE

To access Help Screen Three, the note name and octave must be set. Press 1 <SHIFT> H
You will see:

ENTER DURATION . . .

S	:SIXTEENTH NOTE
E	:EIGHTH NOTE
Q	:QUARTER NOTE
H	:HALF NOTE
W	:WHOLE NOTE
D	:DOTTED NOTE
↑	:RESET

Entering a Non-Dotted Duration will automatically enter your note into memory.

You may choose to enter a Dotted Duration instead. If so, Press D for Dotted Note and <SHIFT> H. This will take you to the Fourth HELP SCREEN.

HELP SCREEN FOUR

After you have pressed D (For Dotted Duration), Press <SHIFT> H

You will see:

ENTER DOTTED DURATION

E	:DOTTED EIGHTH NOTE
Q	:DOTTED QUARTER NOTE
H	:DOTTED HALF NOTE
↑	:RESET

Press the Space Bar to return to song.

EDITING YOUR SONG

MOVEMENT THROUGH THE SONG

To edit your song, you will need to review what you have written on the screen. The staff lines and notes will scroll from right to left using the Right Cursor (=> , Auto Scroll <SHIFT>(=>), or GOTO Command <CTRL> G. Use [SHIFT> CLR/HOME to restore your song to the beginning. Each of these features are explained below:

CLR/HOME

Press <SHIFT> CLR/HOME to reset the display on your monitor screen to the beginning of the song.

RIGHT SCROLL (=>)

Press and hold the CRSR Right Key (=>). Your music will scroll from right to left on the screen.

AUTO SCROLL <SHIFT> (=>)

Your music will scroll automatically right to left without holding down the CRSR right key (=>). Press any key to stop scrolling. This function also serves as Visual Play Mode when sound is toggled on.

GOTO COMMAND <CTRL> G

You may wish to edit a particular measure in your song. The GOTO Command allows you to access any measure you have written. (Recall that the current measure number is displayed at the top right corner of the song screen.)

Press <CTRL> G. The Measure Prompt at the top right corner of the screen will change from current measure to GOTO? A thick bar will be drawn vertically through the staff lines. (The bar indicates that the natural order of the song has been temporarily stopped and that the measures are being edited.)

Enter the measure you wish to edit. This must be entered as a three-digit number.

Example: To GOTO Measure 1, enter 001
To GOTO Measure 42, enter 042
To GOTO Measure 103, enter 103

The maximum number of measures your song can have is 999. If you wish to return to the last measure you have written, enter 999. The screen will flash END OF MEMORY. This indicates that the computer has checked for measure 999 and found nothing. The computer will then display the last measure of your song. Any number larger than the last measure will return the last measure.

If you have not entered any measure lines, entering 999 will return the song to the beginning (Measure 000).

INSERT <SHIFT> I

Press <SHIFT> I. Enter note or rest you wish to insert. The word INSERT will briefly appear. A section of your song will be moved to accommodate the new note.

DELETE <INST/DEL>

Press <INST/DEL>. An X will cover the note or the rest you wish to remove. Measure lines will also be deleted since they are entered in conjunction with the notes. These notes will not reappear when the song is scrolled again.

CLR NOTE BANK (F8)

Press F8 to clear all notes you have written and returns the program to clef entry. This function will give a warning and a choice to abort if pressed mistakenly.

WRITE OVER EDIT MODE

In the Edit Mode you can make changes in your song simply by "writing over" any section you wish to change. Some uses are listed below.

(1) ADD A MEASURE LINE

<SHIFT> M. Re-enter the note.

(2) REMOVE A MEASURE LINE

Re-enter the note. Without pressing <SHIFT> M.

(3) CORRECT A WRONG NOTE

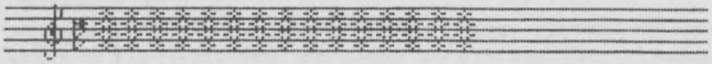
Re-enter the correct note over the wrong note. (Your new note must be the SAME DURATION or you will get an ERROR SYMBOL.)

(4) **SWITCH VOICE TO ALTERNATE CLEF**
Enter Whole Rests (using alternate Clef Sign) for each measure. Write over the Rests. [See: A special technique to change the Clef of a measure].

ERROR SYMBOL
Notes are stored in the computer memory as a series of sixteenth notes in the following manner:

Whole Note	=	16 sixteenths
Dotted Half Note	=	12 sixteenths
Half Note	=	8 sixteenths
Dotted Quarter	=	6 sixteenths
Quarter Note	=	4 sixteenths
Dotted Eighth	=	2 sixteenths
Sixteenth Note	=	1 sixteenth

If you replace a note or rest with one of a different duration, an ERROR SYMBOL will appear. The following picture shows what happens when you write a sixteenth note over a whole note:



NOTICE: If you get an Error Symbol in your song it does not necessarily mean that you have made a mistake. The Error Symbol was designed primarily to display any unused space between notes. You can delete these symbols or insert something between them but keep in mind these functions move sections of your song.

CHANGING SCREEN COLORS
Press <CTRL> | 1,2,3,4,5,6,7 or 8. Each number from 1 through 8 designates a particular color. The colors are marked on the keys you press.

PIANO KEYBOARD ENTRY

The keyboard section of **MUSIC WRITER 64** performs as a combination piano and tape recorder. With these functions you are able to enter music via a piano keyboard. The computer formats your music into measures and records your song. After you have entered one voice, you can record a second and third voice. As you play, **MUSIC WRITER 64** will accompany you with the other voices. This process simulates the techniques utilized in a recording studio.

GETTING STARTED
To access the Keyboard Entry Mode press CTRL K from the Write Mode. This keyboard menu will appear:

KEYBOARD

1) record voice
2) practice
3) play
4) set click speed
5) set time signature
6) erase a voice
7) click on
8) click off

(ctrl w) go back to write screen

click track: [on]

Before we get to the fun part (recording your song), a few things need to be explained.

THE CLICK TRACK:

When a musician sits down in an orchestra or band, he relies on a conductor to give the tempo (beat). When the musician enters a recording studio, he sometimes uses a metronome or a strobe light to supply the beat. Since your Commodore 64 can't hold a baton, it uses the metronome method along with the strobe.

A metronome is a device that makes a clicking or a beep sound. The speed of the click can be varied. In the recording studio this is called the click track.

SETTING THE CLICK TRACK

To set the speed of the click track, press option 4 from the keyboard menu. You will hear the click track and see the flashing strobe at the top of the screen. This screen prompt will appear:

SET CLICK TRACK SPEED
HIT ← for MENU

Enter number from 1-8 . . .

When you first load **MUSIC WRITER 64**, the speed of the click track will be set to 4. This is a medium speed. Speed-setting number 1 is the fastest and setting number 8 is the slowest.

To change the speed enter a number other than 4 and press <RETURN|>. The rate of the click will immediately change and the screen will request:

Is speed ok? (Y or N)

If the speed is okay, press Y (yes) and **MUSIC WRITER 64** will return to the keyboard menu. If you would like to change the speed, press N (no). The program will then ask for the new speed setting. Also, at any time, you can return to the keyboard menu by pressing ←.

NOTICE: Whenever the keyboard section of **MUSIC WRITER 64** asks for a number, an illegal entry will cause the following message to be displayed.

Please re-enter . . .

If this should occur, simply re-enter a legal number. This response can also be expected if you simply hit return without entering a number.

TURNING CLICK TRACK ON & OFF.

Occasionally, you may wish to turn off the click track. This capability is available from the keyboard menu.

7) click on

8) click off

The status of the click track is displayed on the screen below the keyboard menu.

click status: [on]

Press option number 8 to turn the click off. Press option number 7 to turn the click track back on.

NOTICE: Turning the click off does not turn off the strobe. A reference to the beat is always helpful, therefore, the strobe cannot be turned off.

SETTING TIME SIGNATURE:

MUSIC WRITER 64 is capable of placing measure lines in the proper location. Musicians determine the number of beats in each measure by reading the "time signature". **MUSIC WRITER 64** must have the same information to position the measure lines correctly.

To set the time signature, press option number 5 from the keyboard menu. The following screen will appear:

Set time signature
Hit ← for menu

Enter beats per measure.
(1 - 14) . . .

When you load **MUSIC WRITER 64,** the time signature is set to 4/4 time. In effect, there are 4 beats per measure.

To select your choice, simply enter a number from 1-14 and press RETURN. The screen will then display:

Is entry ok? (y or n)

If your entry is okay, press Y and **MUSIC WRITER 64** will return to the keyboard menu. If you wish to change your entry, press N and enter a new number.

You may exit to the menu at any time by pressing ←.

NOTICE: In the keyboard section of **MUSIC WRITER 64,** one beat is equal to 1 quarter note.

PRACTICE MODE

To familiarize yourself with the keyboard, press number 2 from the Keyboard Menu. A piano keyboard will appear. The bottom row of the piano keyboard is played by pressing keys on the bottom two rows of the computer keyboard. The top piano keyboard is played by pressing keys on the top two rows of the computer keyboard.

When you press a key on the computer keyboard, a black dot appears on the key that was played. At the same time a note is sounded for as long as the key is depressed. Below each key on the screen is displayed the note name. When in treble clef, middle C may be sounded by entering the letter V (noted with asterisks) from your computer keyboard.

CHANGE CLEFS

You may switch to bass clef (from treble clef) by pressing F1. You will notice a change in the appearance of the piano keyboard on your screen. Middle C is now in the upper section on the screen. The letter Y on your computer keyboard will now sound middle C. You may alternate between the two clefs by pressing F1 until the desired clef is chosen.

As you play with the practice section of **MUSIC WRITER 64** keyboard, keep in mind that you are learning to play a new instrument. After some practice it is possible to become a virtuoso digital musician.

RECORDING A SONG

This is the fun part you've been waiting for. Select option number one (record voice) from the Keyboard Menu. The following screen will appear.

Record voice
Hit ← for menu.

Enter voice number.
(1, 2 or 3) . . .

MUSIC WRITER 64 is requesting the voice you wish to record. Enter number 1 to record the song into voice 1 (the top voice on the write screen). It doesn't matter which voice you record first. For practice, however, enter 1.

After you select the voice number, the following message will appear.

Enter starting clef
(T)reble or (B)ass

REMEMBER: Once you choose the "starting clef" it is still possible to "switch" to the other clef by pressing F1.

For the sake of practice, press T for the Treble clef screen. The treble clef screen will appear with the following message at the top of the screen.

Press SPACE to start
F7 = exit:

To start recording, press the SPACE BAR.

You may begin recording your song by playing the keys as explained in the Practice mode. The notes will be stored in the computer's memory. Also rests will be store when keys are not depressed.

NOTICE: When you press the space bar the first click sounds, immediately. This click is beat 1 of Measure 1. It's always a good idea to wait a few clicks before you start to play. EX: If your song is in 4/4 time (four beats per measure) you might want to wait 4 or 8 beats to sound, before you start to play. If your song is in 3/4 time (3 beats per measure) wait 3 to 6 beats to sound. These beats give you a chance to get a feel for the tempo before you start to play.

When you press the SPACE BAR the recording starts. If you let some beats pass before you play, **MUSIC WRITER 64** will record rests just as if you typed them in via the WRITE/EDIT mode. If you wish, these rests can later be deleted in the WRITE/EDIT mode (refer to "EDITING YOUR SONG").

When you've finished, press F7 and **MUSIC WRITER 64** will return to the keyboard menu.

Once you have one voice recorded, you can record a second and third voice by following the procedure outlined above. As you enter the second and third voices, **MUSIC WRITER 64** will play back the other voices in perfect tempo to allow you to enter your entire song from the keyboard.

NOTICE: MUSIC WRITER 64 has 12k of memory allocated for the note banks.

When you are recording and **MUSIC WRITER 64** comes to the end of a note bank, the message "RECORD HAS ENDED!" will appear at the top of the screen.

When this happens, press F7 and the keyboard menu will appear.

NOTICE: The record section of **MUSIC WRITER 64** was designed to self-correct minor mistakes. In other words, if you play a little "off the beat", chances are very good that the program will record it correctly. If, however, you play too far off-beat, the program cannot record the note in the time that you wanted. If you make a mistake recording a song, you can either edit it (via WRITE/EDIT) or re-record that voice.

EX: **MUSIC WRITER 64's** Write/Edit mode is designed to interpret the following note durations.

Sixteenth notes	Eighth notes
Dotted eighths	Quarter Notes
Dotted Quarter	Half notes
Dotted Half	Whole Notes

If you try to play a duration that **MUSIC WRITER 64** can't understand, the program will try to match it (as closely as possible) to one of the durations above.

PLAYING YOUR SONG

Once you have recorded a voice, you may **play-back** the song by selecting number 3 from the Keyboard Menu. You may also play your composition by the methods discussed earlier in the manual (refer to "PLAY") accessed from the Write/Edit mode.

The screen will display the following:

Play
Hit ← for Menu

Press SPACE and the following screen will appear.

Play

Hit ← for menu

F1 Fast Forward

F5 Reverse

F7 Fast Reverse

Measure #000

As your song plays, you can "skip" ahead by pressing F1. This is the fast forward button and it acts much like the fast-forward button on a tape recorder.

Pressing F5 will cause the song to play backwards!! Pressing F7 is the fast Reverse button.

NOTICE: The measure number at the bottom of the screen displays the measure currently being played.

This number can only increment. That is, as you move forward, (or fast forward) that number remains accurate. If you use either of the reverse play features. The Measure # will no longer be accurate.

ERASE A VOICE:

In the WRITE/EDIT mode of **MUSIC WRITER 64** you can erase all three voices by pressing F8. With the "Erase a Voice" feature at the Keyboard Menu you can erase a single voice without disturbing the other two.

To use this feature press option number 6 from the Keyboard Menu. The following screen will appear.

Erase a voice
Hit ← for Menu

Erase which voice?

To erase a single voice, enter the voice number and hit return. The following message will now appear.

Are you sure? (y or n)

If you're sure, press Y and the voice will be erased and **MUSIC WRITER 64** will return to the Keyboard Menu. If you would like to keep the voice from being erased, press N and the program will ask for another voice #. This allows you to enter a new voice number or go back to the menu by pressing ←.

EXIT

You may return to the Write/Edit Mode of **MUSIC WRITER 64** by pressing CTRL W at the Keyboard Menu. The song in the computer's memory will remain unchanged allowing you to edit, play and print your composition via the other options available.

DISK OPERATIONS

You must access the Main Menu to get to the Disk operation routines. Press ← to get to the Main Menu from the Write Mode.

Disk Operations are:	4) LOAD	8) INITIALIZE
	5) SAVE	9) SCRATCH
	6) DIRECTORY	0) VALIDATE
	7) FORMAT	

You have already had some experience using a few of the Disk Operations by loading and playing a pre-programmed song from the PROGRAM DISK. After you played the song chosen from the Directory on the PROGRAM DISK, you were told to re-enter the WRITE MODE so that you could begin to compose original songs. You will need another disk (other than the PROGRAM DISK), which we will call your "SONG DISK". DO NOT USE THE PROGRAM DISK TO STORE YOUR SONGS!!.

WARNING: Disk operation routines only work with diskettes that have been properly formatted via the FORMAT routine. Diskettes which have not been formatted will return the error message: WRONG DISK IN DRIVE!! and access to the Load, Save, Directory and Scratch routines will not be allowed. For this reason, the FORMAT routine will be explained first:

FORMAT

Always keep in mind that formatting a SONG DISK erases everything that is stored on the diskette. You should, therefore, use either a new diskette or a diskette which has nothing of value on it.

To FORMAT your SONG DISK, access the Menu. This is shown as Disk Operation (7) FORMAT.
Press 7. A screen will give you a brief definition of a FORMAT routine. It will ask, IS THIS WHAT YOU WANT? (Y or N). If your intention is to create and save a series of original songs, press Y. (If this is not your intention, press N and the program will return to the MAIN MENU.) If you press Y, the question ARE YOU SURE? (Y or N) will appear. (Although these questions appear to be redundant, they are merely designed to prevent you from accidently erasing a diskette on which you have stored valuable data.) Press Y and you will see this statement: WHEN CORRECT DISK IS IN DRIVE, HIT RETURN.

Wait about 80 seconds for the disk to FORMAT. You will return to the MENU.

SAVE

For demonstration purposes, we are going to SAVE a song called PRACTICE. (There is no need to create a song. We can merely save empty note banks.) The SAVE routine is Disk Operation (5) SAVE. Press 5 (from the Main Menu). The following screen will appear:

SAVE

WHAT IS THE NAME OF YOUR SONG?

Ø: .....

↑

(USE THE CURSOR RIGHT TO CHANGE YOUR ENTRY.)

HIT RETURN WHEN DONE . . .
HIT ← TO GOTO MENU.

You will see a dotted line on the screen. An arrow is displayed under the dotted line. The arrow operates as a "pointer". The "pointer" will move to the right as you type in the name of your song. Type PRACTICE. If you make an error in typing, press the CRSR Right key. The arrow will move to the far right of the line and then come back to the first position. Move the CRSR Right key to the position on the dashed line you wish to correct. When all corrections have been made, HIT <RETURN>. The following messages will appear in order:

SAVING DRIVE0: PRACTICE
SEARCHING FOR DRIVE0: PRACTICE
VERIFYING

TEST SHOW ALL OK!
PLEASE HIT RETURN

You will now return to the MENU.

IMPORTANT: One SONG DISK can hold up to 13 songs. If you try to SAVE to a disk which already has the maximum number of songs (13) on it, the directory will appear with the message: DISK FULL . . . HIT ANY KEY. If this should happen, you may either refer to the procedures shown on the SCRATCH routine outlined below or start a new disk using the format routine. Neither of these routines will alter or harm the song in the memory of the computer.

VERIFY

After a SAVE or LOAD, a VERIFY is automatically started. A verify compares the data on the diskette with the data in memory.

The 5 messages that can appear after a Verify are:

1) TEST SHOWS ALL OK
2) TEST SHOWS ERROR!!!?
3) TEST SHOWS THAT DISK DRIVE IS NOT THERE
4) TESTS SHOWS THAT FILE DOES NOT EXIST. MAKE SURE THAT DISK IS IN DRIVE
5) TEST INCOMPLETE.

The first message appears when the data on the disk matches the data in the 64's memory. This indicates that the save or load was okay.

The second message appears when the data on the disk DOES NOT match with the data in memory. When this happens, you should try to save or load the song again.

Message three appears when the Disk Drive is either not on, or if it is not connected.

Message four appears if the song was not saved at all. This will happen when a Write Protect Tab is on the disk. This message can also appear in both the Save and Load operations if the disk is not in the drive.

Message five will appear if you press the Stop key during the verify.

NOTICE: If you get an error message after a save, you may try the save again. The Verify Command does not alter the song in memory.

LOAD

Press 4 (from the Main Menu). If the SONG DISK has not been properly formatted, you will get the message: WRONG DISK IN DRIVE!! If the SONG DISK is in the Drive and is formatted, the LOAD SCREEN will appear. The LOAD SCREEN shows a listing of songs and also gives instructions on how to load your song. Loading instructions are displayed on the right-hand side of the screen.

(If you have been following the demonstration instructions, you will see A) PRACTICE.

When you have Created and SAVED a song you have written in the WRITE MODE, LOAD the song by pressing the letter opposite the song title. The screen will display three messages in order:

SEARCHING FOR 0: NAME(of your song)
LOADING
VERIFYING
TEST SHOWS ALL OK!

Should the song not load properly, the screen will say: TEST SHOWS ERROR!!?, HIT RETURN. (THE <RETURN> key will take you back to the Menu.) Repeat the LOADING process. The song should load properly the second time.

NOTICE: The verify command can be aborted in the LOAD and SAVE commands by pressing the RUN/STOP key. If VERIFY is aborted, "TEST SHOWS INCOMPLETE" will appear. It is recommended that you allow this command be completed since it is the only valid test of a SAVE.

After the song has LOADED, HIT <RETURN>. The staff screen will appear. To play the song, HIT <F1> and select choices from the play screens. Press ← to return to the Main Menu.

DIRECTORY

Press 6 (from the Menu). The directory screen will appear. This screen looks the same as the LOAD SCREEN with the exception of the LOADING INSTRUCTIONS. Accessing the Directory only allows you to see the songs which are on the SONG DISK. HIT ← to return to the Main Menu.

SCRATCH

Press 9 (From the Main Menu) to erase a song from the song disk. You will see:

PLEASE WAIT . . .

The following screen will appear:

SCRATCH

TO SCRATCH
PRESS THE LETTER
THAT APPEARS
BEFORE THE SONGS
TITLE.

PRESS ← FOR MENU

The word DIRECTORY will appear on the left side of the screen at the top. Under the word DIRECTORY, you will see the name of a song.
For example: A) PRACTICE

At the top of the screen on the right you will see: *SCRATCH* Under this word are instructions telling how to erase a song.

Press A. The screen will say:

ERASE PRACTICE? (Y or N)

Press Y. On the same screen will appear:

ARE YOU SURE? (Y or N)

Press Y. A screen will say:

PLEASE WAIT . . .

The SCRATCH routine will erase specific songs from the SONG DISK without harming any of the other songs in the Directory.

When the song has been erased, the Directory Screen will reappear. The song you have scratched will no longer be in the Directory. The right-hand side of the screen directs you to HIT ANY KEY. You will return to the Menu.

VALIDATE
Press 0 (From the Menu). Recall that the SONG DISK will only hold 13 songs. Therefore, after a number of SAVE and SCRATCH routines, you may want to use the VALIDATE operation to check to see if space is available on the disk for future songs. This screen will appear:

VALIDATE

AFTER REPEATED SCRATCH & SAVE OPERATIONS, A "VALIDATE" SHOULD BE DONE. THIS INSURES THAT ALL UNUSED SPACE ON THE DISKETTE IS AVAILABLE.

PRESS V TO VALIDATE

PRESS ← TO GO BACK TO MENU.

Press the letter V to VALIDATE. Another screen will appear:

PRESS RETURN WHEN DISKETTE IS IN DRIVE

After you have pressed <RETURN>, the screen will say:

PLEASE WAIT . . .

This operation can take from a few seconds to over a minute to complete. When the diskette has been VALIDATED, the program will return to the Menu.

INITIALIZE
Sometimes, after a Disk Operation has been performed, the red light on the Drive will flash. This means that an error has occurred. Use the INITIALIZE routine to Reset the Disk Drive which turns the red light off. Press 8 (From the Menu). The red light on the Drive will flash once and then the Menu will reappear.

PRINTING YOUR SONG

ACCESSING PRINT MENU
Hit ← to access Main Menu from the Write Mode.

Press 2 if you have a VIC 1525 Printer.

Press 3 if you have another brand of Printer using "THE CONNECTION"* Interface.

Advance the paper in the printer to the top of the page.

PRINT OPTIONS
You may choose two of the following options from the Print Menu:
1) PRINT FROM START
2) SNAPSHOT
3) PRINT FROM PLACE
4) NORMAL WIDTH
5) DOUBLE WIDTH

IMPORTANT: If you wish to print DOUBLE WIDTH, you must choose this option BEFORE you choose the other options.

PRINT FROM START <F1>
Prints your music from beginning to end. Pages are automatically numbered.

*"THE CONNECTION" Interface is Copyrighted by RAK-Ware. Available through Microware Distributors.

SNAPSHOT <F3>
This is a screen dump. It prints only the music shown on the song screen.

PRINT FROM PLACE <F5>
Prints music shown on the song screen as well as any music which follows.

NORMAL WIDTH <CTRL> N
Prints characters (notes, rests, sharps, flats, naturals) in standard size.

DOUBLE WIDTH <CTRL> D
Doubles the size of printed characters.

STOPPING THE PRINTOUT
Press <CTRL> P. This will temporarily stop the printer. (You may have to press this key more than once.) The monitor will beep three times. You may do one of two things:

(1) CONTINUE
Press <RETURN>

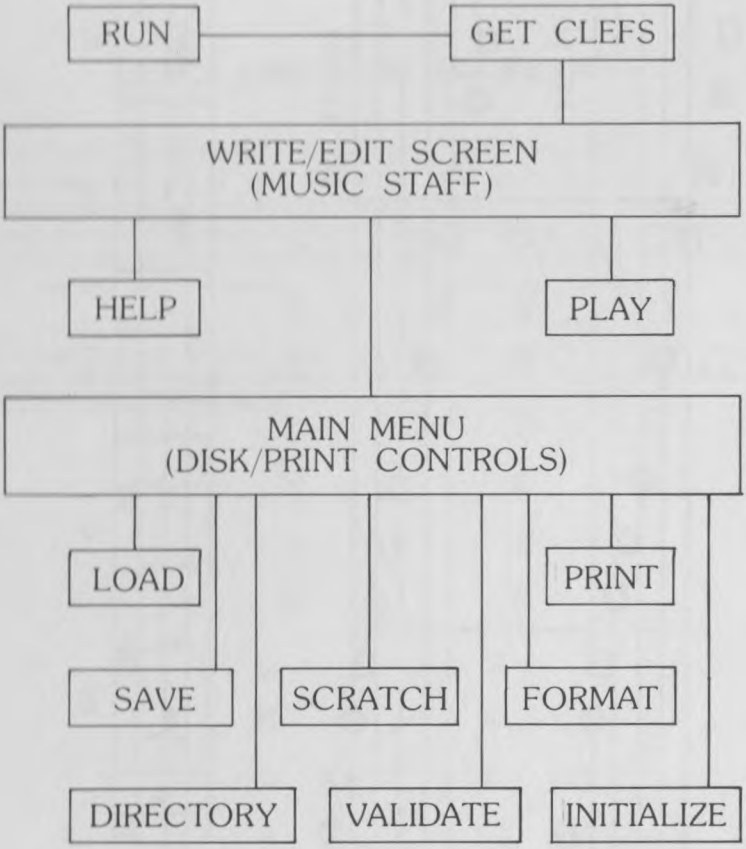
(2) EXIT
Press ←

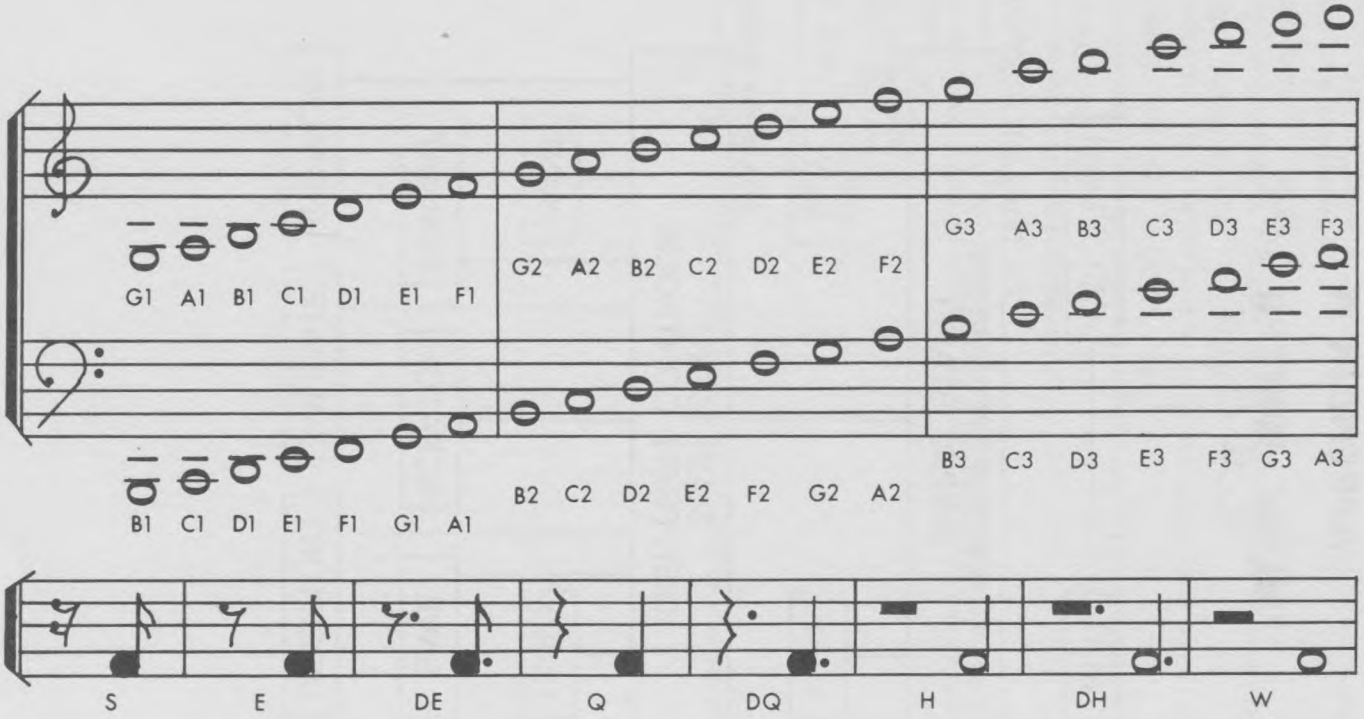
ERROR MESSAGE
If you have neglected to turn on the printer the program will return to the Print Menu.

APPENDIX A

MUSIC WRITER 64

FLOW CHART




G1 A1 B1 C1 D1 E1 F1
G2 A2 B2 C2 D2 E2 F2
G3 A3 B3 C3 D3 E3 F3
B1 C1 D1 E1 F1 G1 A1
B2 C2 D2 E2 F2 G2 A2
B3 C3 D3 E3 F3 G3 A3
S
E
DE
Q
DQ
H
DH
W

APPENDIX B

DISCLAIMER OF WARRANTY

This **MUSIC WRITER 64** software program and Manual are sold "as is" and without warranties as to performance for any particular purpose. Double E Electronics will not be held liable for direct, indirect or incidental damages resulting from and defect or omission in this Manual, the floppy disks or cassette tapes, or other related items and processes, including but not limited to any interruption of service, loss of business and anticipatory profit, or other consequential damages.

Because of the diversity of conditions and hardware under which this program may be used, no warranty of fitness for a particular purpose is offered. The user is advised to test the program thoroughly before relying on it. The user must assume the entire risk of using the program.

M U S I C W R I T E R - 6 4

-Three Complete Voices

-Easy to Learn Note Entry Format

-4 1/2 Octave Range Per Voice

-Transfer Between Treble and Bass Clefs

-12 K Note Storage Area

-Realtime Control of Waveforms and Filter

-Full Editing Capabilities

-Save and Load Songs on Diskette

-Full Disk Access Via Program

-Help Screens to Give Aid During Create/Edit

-Hi-Res Graghics <u>PRINTS SHEET MUSIC TO PRINTER</u>

-Normal or Double-Wide Printout